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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/807,752      | 03/23/2004  | Gregory Katch        | DP-309906/DE3-0323  | 4302             |

7590 12/14/2004  
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EXAMINER

LEYKIN, RITA

ART UNIT PAPER NUMBER

2837

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/807,752

Applicant(s)

KATCH ET AL.

Examiner

Rita Leykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-22 and 24-29 is/are rejected.
- 7) ☒ Claim(s) 11 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/15/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-10, 12-22 and 24-29 are rejected under 35U.S.C. 102(a) as being anticipated Kaufmann et al. by US # 6,370,460.

With respect to claims 1, 4, 14, 27-29, Kaufmann et al. show in Fig. 2 a steering wheel unit 14. A steering wheel torque command signal 18 is received from master control unit 12 (Fig. 1). The vehicle speed signal 28 comes from vehicle speed sensor 29, (see column 2, lines 31-67).

In Fig. 5 the torque control unit 46 performs several processes for generating a steering torque command signal 18 beside the others, based on input from vehicle speed 28 and feedback torque sensor signal 36, (see column 4, lines 41-47). Kaufmann et al. teach a damping torque command signal that is sent to the compensation process 50 of the torque control unit 46. The compensation process 50 outputs the compensated torque command signal 48 to the feel process 52, which includes two sub-processes. The first sub-process is assist 53 for generating an assist torque command signal as function of vehicle speed. The assist sub-process 53 indexes the composite force signal initiated compensated torque command signal into a set of look-up tables yielding an assist torque command, as in claims 1, 2, 3, 4, 14, 15, 16 and

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17, (see column 5, lines 3-25). The second sub-process employed in the feel process 52 is the return sub-process 54, that generates a return to center torque command to drive the steering wheel and the steer-by-wire system 10 to center, as in claims 13 and 26, (see column 5, lines 33-46).

With respect to claims 5, 7, 9, 12, 18, 20, 22 and 25, see column 4, lines 63-67, Kaufmann et al. disclose that compensation process 50 includes frequency based filtering to manipulate the spectral content of the damping torque command signal 47.

With respect to claims 2, 3, 6, 8, 15, 16, 19 and 21 Kaufmann et al. teach in column 5, lines 59-65 that different processes could be employed in addition or in lieu of look-up tables including gain or parameter scheduling.

### ***Allowable Subject Matter***

3. Claim 11 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter. The prior art made of record in the attached form PTO-892 considered to be pertinent to the submitted application.

However, none of the prior art teaches or suggest in combination:

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- A selectable threshold, for scheduling a combination of torque command signal and compensated torque command signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita Leykin whose telephone number is (571)272-2066.

The examiner can normally be reached on Monday-Friday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571)272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R.L.

Rita Leykin  
Primary Examiner  
Art Unit 2837

